

SPECIFICATION

[0031] Contact of one or more metallic elements 220 with the electrical contact brushes 250 completes an electrical circuit which allows power supply 290 to flow current [[to flow]] through the metallic elements 220, causing them to heat up. Heating of the metallic elements 220 melts any adherent frost, which then drains from the bottom of the filter 210 to a gravity fed drain line (described below). Upon movement of the metallic elements 220 away from the electrical contact brushes 250, the metallic elements 220 rapidly lose heat, once again chilling to the ambient temperature within the interior of the refrigeration unit.

[0038] Removal of accumulated frost 445 from the filter 410 can be further facilitated by including a source of electrical power 290, as described above, to periodically heat the metallic elements 420 of the filter 410. Frost removal can be effected by heating alone, or preferably in combination with the mechanical action of one or more scrapers 425. The device 400 shown in FIG. 3 includes both a scraper 425 and [[an]] electrical contact brushes 450. Electrical contact brushes 450 are shown contacting metallic elements 420 which completes the closed circuit which permits source of electrical power 290 to [[for]] heat[[ing]] the metallic elements 420. In embodiments such as device 400 in which the metallic elements 420 are included within the matrix of the filter 410, portions of the metallic elements 420 can extend beyond the edges of the filter 410, to make contact with the electrical contact brushes 450.

[0039] For optimal energy conservation in embodiments incorporating rotating filter mechanisms, such as the device 400 shown in FIG. 3, the electrical contact brushes 450 or other suitable electrically conductive surfaces connected to the electrical power

source 290 should generally be positioned close to the site of scraping of the filter 410, i.e., closely "downstream" of the scraper 425 in the direction of rotation (shown by arrows) of the filter 410. According to such an arrangement, the majority of the deposited frost 445 is eliminated mechanically by the scraper 425, thereby minimizing the energy required to melt the remaining adherent frost by heating the metallic elements 420 by contact with the electrical contact brushes 450.